



**State of Hawaii
Department of Business,
Economic Development & Tourism
(www.state.hi.us/dbedt/ert)**

1993-1994:	Energy and Environmental Summit
1994:	Hawaii Wind Workshop
1994-1996:	Renewable Energy Collaborative (PUC Docket 94-0226)
1995, 2000:	Hawaii Energy Strategy

1993-1994: Energy and Environmental Summit

- Collaborative process convened by the Legislature to solicit input on energy and environmental legislation
- Kick-off meeting held in June, 1993. Committees formed:
 - Education
 - Compliance and Enforcement
 - Energy
 - Recycling
- Between June and October, committees met to discuss issues and draft legislation
- Summit held on October 23, 1993.
- Several legislative measures were introduced in the 1994 session. Some measures succeeded; others failed
- Some bills that did not pass in 1994 have since been enacted.

1994: Hawaii Wind Workshop

Technology and Industry - Presenter: Sue Hock (NREL); Panel Members: Eric Miller (Kenetech), Bob Gates (Zond), Jeff Maurer (NWP), Robert Lynette (RLA), Edan Harel (TRM)

Resource Availability - Presenter: Karen Conover (R. Lynette & Associates); Panel Members: Monty Richards (KRL), Dick Cameron (HC&S), Mason Young (DLNR)

Utility Integration Issues - Presenter: Charlie Smith (Electrotek); Panel Members: Alva Nakamura (HECO), Ed DeMeo (EPRI), Jonathan Lynch (NPS)

Project Development - Presenter: Dr. Jan Hamrin (Hansen, McQuat, Hamrin & Rohde, Inc.); Panel Members: Dan Ching (HECO), Curt Maloy (NWP), Keith Avery (Zond)

Government Support to Industry - Presenters: Ron Loose (DOE), Maurice Kaya (DBEDT); Panel: Lawrence Mott (NPS), Mike Boughton (MEDB), Dr. David Rezachek (DBEDT)

Benefits of Windpower to Hawaii - Presenter: Tom Gray (AWEA); Panel members: Dr. Richard Joun (DBEDT), John Mapes (CA), Paul Brewbaker (BOH)

Integrated Resource Planning - Presenter: David Moskovitz (Consultant); Panel: Roy Uemura (HECO), Blair Swezey (NREL), Colette Gomoto (PUC)

Stakeholder Perspectives - Chairman: Andrew Trenka (PICHT); Presenters: Ron Lehr (Consultant), Tom Jezierny (MECO), Warren Lee (HELCO)

Public Perspectives - Presenter: Clyde Murley (NRDC); Panel Members: Dr. Ira Rohter (GP), Scott Derrickson (HEC), Dr. Michael Jones (UCS)

Regulatory Perspectives - Presenter: David Moskovitz (Consultant); Panel: Yukio Naito (PUC), Gerry Sumida (Carlsmith Ball), Ron Lehr (Consultant)

Legislative Perspectives - Presenter: Eric Sikkema (National Conference of State Legislatures); Panel: Matt Matsunaga (Hawaii), Dr. Duke Bainum (Hawaii), Robert Herkes (Hawaii)

1994 Hawaii Wind Workshop: Proceedings Available

Proceedings of the 1994 Hawaii Wind Workshop are available:

www.hawaii.gov/dbedt/ert/hww94

1994-1996: Renewable Energy Collaborative

Public Utilities Commission (PUC) Docket 94-0226 was initiated, at the request of the 1994 Legislature, to:

- Study the policies, statutes, and programs of other jurisdictions, as well as the strategies employed by these jurisdictions to implement the deployment of renewable energy resources;
- Examine policies presently employed by the State of Hawaii with respect to facilitating the utilization of renewable energy resources;
- Identify barriers to the development of renewables in Hawaii, and
- Formulate strategies to remove the barriers and implement the use and development of renewables in Hawaii.

Renewable Energy Collaborative: Parties to the Docket

21 Parties:

- **Counties** of Hawaii, Kauai, and Maui
- **State agencies:** DBEDT, DCCA
- **Utilities:** HECO, MECO, HELCO, KE
- **Land Owners:** Hawaiian Commercial and Sugar Company; Kahua Ranch, Ltd.
- **Non-utility energy companies:** Inter-Island Solar Supply; Makani Uwila Power Corporation; Energy Resource Systems; TRM/Wind Energy International, Inc.; Waimana Enterprises, Inc.; Zond Pacific, Inc.
- **Consultants:** the Pacific International Center for High Technology Research; RLA Consulting Inc.
- **Individuals:** the Honorable Senator Matt Matsunaga; David Rezachek

Renewable Energy Collaborative: NREL Report

Recommendations:

- A clear pronouncement by the State that renewable energy development remains an important objective, and the establishment of a concrete goal for renewable development and supporting policies.
- Establishment by the State of an official preference that all new generating capacity employ renewable energy resources unless it is demonstrated, on a case-by-case basis, that the employment of renewables is not in the public interest.
- Development of financial incentives to utilities, renewable energy providers, and customers that could be funded from general revenues or by a “systems benefit charge” assessed on all electricity customers.

Renewable Energy Collaborative: NREL Report

Recommendations (continued):

- Establishment of a portfolio standard to create a market for the development of renewables by imposing a minimum renewable energy requirement for the State's electricity mix.
- Development by the utilities of a competitive green power product that allows customers to exercise voluntarily a preference for electricity from renewable energy sources.
- Authorization for alternative renewable energy providers to supply renewable energy service options directly to a utility's wholesale and retail customers.
- Establishment of a net energy metering policy that allows customers to offset high retail rates with small-scale renewable electric systems.

Renewable Energy Collaborative: Barrier Groupings

Barriers grouped into 10 categories:

- 1: Avoided cost
- 2: Penetration level
- 3: Permitting & Land Availability
- 4: RE Revenue Stream & financing
- 5: RE not in Utility 20-year plans
- 6: Lengthy power purchase negotiations
- 7: Regulatory Structure
- 8: Environmental & Social Impacts
- 9: Status of technologies
- 10: Governmental Commitment

Barrier Grouping #1: Insufficient avoided cost prices for developer financing

- 1.a - Uncertainties regarding the applicability and availability of state income tax credits to renewable energy ("RE") projects
- 1.b - Cost effectiveness of RE resources
- 1.c - Unresolved avoided cost issues
- 1.d - Current fuel adjustment clause passes risk of oil price variability to customers
- 1.e - Evaluation and consideration of the beneficial impacts of renewable energy use relative to conventional fossil fuel resources
- 1.f - Inability of utility system operation models and economic models to accurately and adequately model and evaluate renewable energy systems

Strategies Proposed to Address Issues in Barrier Grouping #1

- 1.a.1 - Seek clarification from DoTax regarding applicability of existing tax credits to large RE facilities
- 1.a.2 - Support and maintain existing RE tax credits to the extent appropriate
- 1.a.3 - Examine the efficacy of additional State incentives to encourage RE
- 1.b.1 - Deploy renewables that appear to be currently cost-effective... monitor costs of other renewables
- 1.b.2 - Improve the cost-effectiveness of renewable resources through research, development, and demonstration
- 1.b.3 - Increase/refocus the government tax incentives currently available
- 1.b.4 - Provide government support in addition to government tax incentives (to expedite permitting, to make government sites available, etc.)
- 1.b.5 - Develop and implement a green pricing tariff
- 1.b.6 - Energy wheeling for counties
- 1.b.7 - Net billing payment rates for small RE systems
- 1.c.1 - Reduce the uncertainty regarding avoided costs
- 1.c.2 - If any avoided capacity costs can be reasonably demonstrated for an as-available resource, the amount ... should be included in determining the value and pricing of the resource
- 1.c.3 - Analyze combined effects of a variety of distributed renewable energy projects in a given service area
- 1.d.1 - PUC eliminate the ECAC on a forward-going basis
- 1.d.2 - Conduct analysis (on how to) flatten the risk and impacts on ratepayers of oil price variability
- 1.e.1 - Require utilities to pay an externalities adder above avoided cost
- 1.e.2 - Develop and implement a "green pricing" tariff
- 1.e.3 - Consider a production incentive for RE developers funded by a utility customer surcharge
- 1.f.1 - The PUC should approve the stipulated agreement ... and resolve ... Docket No. 7310
- 1.f.2 - Consider modeling conventions and generation capacity expansion criteria that are sensitive to the contribution of as-available resources towards system reliability

Renewable Energy Collaborative: Report Available

The 1996 Public Utilities Commission Report to the Hawaii State Legislature, "*STRATEGIES TO FACILITATE THE DEVELOPMENT AND USE OF RENEWABLE ENERGY RESOURCES IN THE STATE OF HAWAII*," is available:

www.hawaii.gov/dbedt/ert/puc940226

1995, 2000: Hawaii Energy Strategy

TECHNICAL ADVISORY GROUPS

Technical Advisory Groups were comprised of members of Hawaii's "energy community", including energy companies, utilities, environmental groups, and state and county government organizations. Sub-committees were formed for periodic review of the progress and results of each project.

PUBLIC PARTICIPATION WORKSHOPS

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|---------------------|---|
| October 23, 1992. | 130 participated in the workshop; 82 participated by mail. |
| January 11, 1994. | 180 registered to attend and another 110 who could not attend requested a copy of the <i>Status Report</i> and the questionnaire. |
| September 20, 1995. | Workshop presented final report and provided the public with a final opportunity for input into the 1995 HES. |
| December 9, 1999. | Workshop presented updated HES (HES2000) and received public comments. About 80 participants. |

Hawaii Energy Strategy: Report Available

The Hawaii Energy Strategy 2000 report is available:

www.hawaii.gov/dbedt/ert/hes2000

Summary

- Information is available from previous workshops and “working group” efforts
- Some of those efforts were quite broad; consensus was difficult
- Since those previous efforts, some important advancements have been made in wind energy
- Other previously-identified issues remain
- Using existing work will avoid the need to start from scratch